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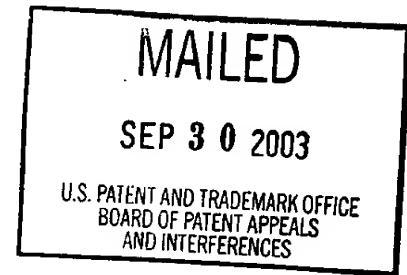
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Paper No. 26

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte SCOTT D. LUCAS
and ROBIN K. MASKELL



Appeal No. 2003-1974
Application 09/317,409

ON BRIEF

Before WARREN, LIEBERMAN and JEFFREY T. SMITH, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*:

Decision on Appeal

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner finally rejecting claims 55 and 57 through 59. Claims 1 through 12, 39 through 46, 60 through 76 and 87 are also of record and have been withdrawn from consideration by the examiner under 37 CFR § 1.142(b). Claim 55 is illustrative of the claims on appeal:

55. A prepreg of a honeycomb sandwich structure precursor including a honeycomb core, a stiffness-treated prepreg ply and a second prepreg ply, in the absence of a tiedown ply contacting the honeycomb core, and where the stiffness-treated prepreg ply and the second prepreg ply are disposed adjacent one another, said stiffness-treated prepreg ply comprising:

a stiffness-treated fabric including a plurality of fibers and a polymeric material disposed on at least some of the fibers, where the stiffness-treated fabric exhibits an ASTM stiffness value greater than the ASTM stiffness value of an untreated fabric; and

a resin system,

the stiffness-treated prepreg ply, when disposed on the second prepreg ply comprising a resin system and a fabric selected from the group consisting of the stiffness-treated fabric and untreated fabrics, exhibiting a frictional resistance between the stiffness-treated prepreg ply and the second prepreg ply sufficiently greater than the frictional resistance between two untreated prepreg plies disposed on one another, where each of the two untreated prepreg plies comprises the resin system and an untreated fabric, so as to enhance resistance to core crush during fabrication of a honeycomb core structure from the honeycomb structure precursor.

The reference relied on by the examiner and appellants in the grounds of rejection is:

Corbett et al. (Corbett) 5,895,699 Apr. 20, 1999

The examiner has advanced the following grounds of rejection on appeal:

claims 55 and 57 through 59 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention; and

claims 55 and 57 through 59 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Appellants state in their brief that the appealed claims “stand or fall together” (page 3).

Thus, we decide this appeal based on appealed claim 55. 37 CFR § 1.192(c)(7) (2002).

We affirm the ground of rejection under 35 U.S.C. § 112, first paragraph, written description requirement, and we reverse the ground of rejection under 35 U.S.C. § 112, second paragraph.

Rather than reiterate the respective positions advanced by the examiner and appellants, we refer to the examiner’s answer and to appellants’ brief for a complete exposition thereof.

Opinion

The initial burden of establishing a *prima facie* case on any ground under the second paragraph of § 112 rests with the Examiner. See *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992), citing *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984) (“As discussed in *In re Piasecki*, the examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability.”). In making out a *prima facie* case of non-compliance with this statutory provision on the basis that a claim is indefinite for failing to particularly point out and distinctly claim the subject matter which appellant regards as the invention, the examiner must establish

that when the language of the claim is considered as a whole as well as in view of the written description in the specification as it would be interpreted by one of ordinary skill in the art, the claim in fact fails to set out and circumscribe a particular area with a reasonable degree of precision and particularity. *In re Moore*, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971).

With respect to 35 U.S.C. § 112, first paragraph, written description requirement, it is well settled that the examiner has the burden of making out a *prima facie* case that the appealed claims do not comply with this section of the statute by setting forth evidence or reasons why, as a matter of fact, the written description in appellant's disclosure would not reasonably convey to persons skilled in this art that appellants were in possession of the invention defined by the claims, including all of the limitations thereof, at the time the application was filed. *See generally, In re Alton*, 76 F.3d 1168, 1175-76, 37 USPQ2d 1578, 1583-84 (Fed. Cir. 1996), citing *In re Wertheim*, 541 F.2d 257, 263-64, 191 USPQ 90, 97 (CCPA 1976). A negative limitation which does not appear in the written description of the specification as filed would cause the claim to violate the written description requirement of § 112, first paragraph, if it introduces new concepts. *See Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983), *aff'd mem.*, 738 F.2d 453 (Fed. Cir 1984), citing *In re Anderson*, 471 F.2d 1237, 176 USPQ 331 (CCPA 1973).

The claim language at issue here is the phrase "in the absence of a tiedown ply contacting the honeycomb core" appearing in the preamble of appealed claim 57. It seem to us from the plain language of the phrase that one of ordinary skill in this art would find that the "tiedown ply" intended is one that would "tiedown" the honeycomb core if attached thereto and thus this claim in fact sets out and circumscribe a particular area with a reasonable degree of precision and particularity as required by § 112, second paragraph. Indeed, in response to the examiner's contentions that one of ordinary skill in this art would not understand the meaning of the phrase (answer, pages 3 and 8-9), appellants point to tiedown ply 150 in contact with honeycomb core 106 along a chamfer 155 in Corbett (e.g., col. 5, line 49, to col. 6, line 18, and FIG. 6) to support their argument that one of ordinary skill in this art would have understood the meaning of the term. Because we agree with appellants' position, we reverse this ground of rejection.

What is “tied down” with a “tiedown ply” according to the written description in the specification is the issue in the second ground of rejection. We find the following disclosure in appellants’ specification:

... known methods utilized to reduce core crush during the autoclave process have focused on preventing the differential movement by either mechanical/physical means (i.e., using tie downs to keep the prepreg plies from differentially moving) . . .

. . .

As discussed above, known prepreg plies have their differential movement constrained to reduce core crush in honeycomb sandwich structures produced therefrom. Known methods of constraining this differential movement have focused on mechanical/physical constraining means (i.e., using tie downs) . . . [pages 1-3.]

We further find that in addition to tiedown ply 150 in contact with honeycomb core 106, Corbett discloses that

[t]raditionally, we use four complete cover sheet tiedown plies 175 in an effort to anchor the layers and the core, and we show all these plies in FIG. 6. These traditional plies 175 were commonly used in sandwich panel fabrication prior to introducing the Hartz-type barrier film, and we commonly use them all, although we believe we can now eliminate all but the outer plies and the peripheral, core contacting tiedown ply 150. That is, we would use three total plies rather than five, as FIG. 6 shows.

The tiedown plies 150 and 175 extend through the edgeband 160 beyond the net trim line 165 to anchoring points that we tape to the layup mandrel. To further prevent slippage of the tiedown plies, we have incorporated a low curing . . . film adhesive 180 between the tiedown plies just outside the net trim line of the part. The film adhesive 180 eliminates movement of one ply relative to the others when we apply pressure during the autoclave curing cycle.

Thus, the tiedown method of the present invention can save material, reduce costs, and save weight, if only the “picture frame” peripheral tiedown ply 150 is used (with the traditional, internal sheets omitted). The normal tiedown procedure entails plies on the outer surfaces of the skins and internally between the skin and underlying adhesive. This tiedown system fails without the “picture frame” ply because the barrier film 110 permits the core to slip. [Col. 6, lines 19-45.]

In comparing the disclosure that it was known to use “tie downs to keep the *prepreg plies* from differentially moving” in appellants’ specification with the exclusionary phrase “in the absence of a tiedown ply contacting the *honeycomb core*” in appealed claim 57, in light of the disclosure in Corbett that different tiedowns are used for the honeycomb core, tiedown ply 150, and for prepgs, tiedown ply 175, it seems to us that as a matter of fact, the “tiedown” for the

honey comb core in appealed claim 57 involves a different concept than the “tie down” for the prepreg plies in the specification. Thus, we are of the opinion that the exclusion of a tie down which is *not* described to one of ordinary skill in this art in the written description in the specification and *not* the tie down that is described therein, adds a negative limitation involving a new concept to the claimed invention which violates § 112, first paragraph, written description requirement.

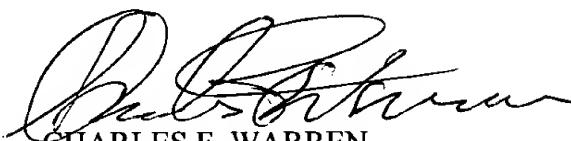
We are not convinced otherwise by appellants’ arguments (brief, pages 3-6). Appellants at once argue that a negative limitation which is not found at all in the specification is permissible and that the specification provides a basis for the negative limitations in stating that tie downs are to be avoided. Indeed, in view of the different types of tiedowns known in the art, the elimination of one type but not the other does not support appellants’ contention that “[t]he use of stiffened fabric instead of, not in addition to tie down plies is, as set forth above, clearly conveyed by the present specification” (id., page 5).

Accordingly, on this record, we affirm the ground of rejection based on 35 U.S.C. § 112, first paragraph, written description requirement.

The examiner’s decision is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED



CHARLES F. WARREN
Administrative Patent Judge

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PAUL LIEBERMAN
Administrative Patent Judge

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BOARD OF PATENT
APPEALS AND
INTERFERENCES



JEFFREY T. SMITH
Administrative Patent Judge

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Appeal No. 2003-1974
Application 09/317,409

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